a magnet connected to the roller, the magnet positioned to rotate with rotational displacement of the roller, the magnet positioned to linearly displace with linear displacement of the roller;

a sensor connected to the base, the sensor configured to measure both the orientation and intensity of a magnetic field produced by the magnet and passing through the sensor; and

a spring assembly connected to the roller and the base, the spring assembly positioned to exert force on the roller in the first linear direction when the roller is at the depressed position, the spring assembly positioned to exert torque on the roller in the first rotational direction when the roller at the minimum angle, the spring assembly positioned to exert torque on the roller in the second rotational direction when the roller is at the maximum angle.

10. The control of claim **9**, wherein the top stop is a portion of the slot at a first end of the slot in the direction of the slot length where the pin contacts the slot when the roller is at the neutral position and the bottom stop is a portion of the slot at a second end of the slot opposite the first end of the slot in the direction of the slot length where the pin contacts the slot when the roller is at the depressed position.

11. The control of claim **9**, wherein the top stop is a portion of the slot at an end of the slot in the direction of the slot length where the pin contacts the slot when the roller is at the neutral position and the bottom stop is a portion of the base which contacts the roller when the roller is at the depressed position.

12. The control of claim **9**, wherein the spring assembly is positioned to exert a first force on the roller in the first linear direction when the roller is at the depressed position, the spring assembly is positioned to exert the equivalent of a second force on a surface of the roller tangent to the surface in the first rotational direction when the roller is at the minimum angle, the spring assembly is positioned to exert the equivalent of a third force on the surface of the roller tangent to the surface in the second rotational direction when the roller is at the maximum angle, and the magnitude of the first force is greater than the magnitude of the second force and greater than the magnitude of the third force.

13. The control of claim **9**, further comprising a shield positioned between the base and the roller, wherein the shield comprises a hole, the roller comprises a protrusion, and the protrusion is positioned within the hole when the roller is at the depressed position and the neutral angle.

14. The control of claim **9**, further comprising a shield positioned between the base and the roller, wherein the shield comprises a first hole, a second hole, and a third hole, the roller comprises a protrusion, the protrusion is positioned within the first hole when the roller is at the depressed position and the neutral angle, the protrusion is positioned within the second hole when the roller is at the depressed position and the maximum angle, and the protrusion is positioned within the third hole when the roller is at the depressed position and the minimum angle.

15. The control of claim **9**, wherein the sensor is a Hall Effect sensor.

16. The control of claim **9**, wherein the sensor is configured to provide a rotation signal indicative of the rotational displacement of the roller based on the measured orientation of the magnetic field, and to provide a displacement signal indicative of the linear displacement of the roller based on the measured intensity of the magnetic field.

17. The control of claim **16**, where the displacement signal is binary such that it indicates the roller is not depressed unless the measured intensity of the magnetic field is greater than a threshold, in which case it indicates that the roller is depressed.

18. A user actuated control comprising:

a base;

a roller;

a housing pivotally connected to one of the base and the roller and slidingly connected to the other of the base and the roller so as to allow rotational displacement of the roller relative to the base from a minimum angle to a maximum angle and linear displacement of the roller relative to the base from a neutral position to a depressed position;

a magnet connected to the roller, the magnet positioned to rotate with rotational displacement of the roller, the magnet positioned to linearly displace with linear displacement of the roller;

a sensor connected to the base, the sensor configured to measure both the orientation and intensity of a magnetic field produced by the magnet and passing through the sensor; and

a spring assembly connected to the roller and the base, the spring assembly positioned to exert force on the roller in the first linear direction when the roller is at the depressed position, the spring assembly positioned to exert torque on the roller in the first rotational direction when the roller at the minimum angle, the spring assembly positioned to exert torque on the roller in the second rotational direction when the roller is at the maximum angle.

19. The control of claim **18**, wherein the spring assembly is positioned to exert a first force on the roller in the first linear direction when the roller is at the depressed position, the spring assembly is positioned to exert the equivalent of a second force on a surface of the roller tangent to the surface in the first rotational direction when the roller is at the minimum angle, the spring assembly is positioned to exert the equivalent of a third force on the surface of the roller tangent to the surface in the second rotational direction when the roller is at the maximum angle, and the magnitude of the first force is greater than the magnitude of the second force and greater than the magnitude of the third force.

20. The control of claim **18**, wherein the sensor is a Hall Effect sensor, the sensor is configured to provide a rotation signal indicative of the rotational displacement of the roller based on the measured orientation of the magnetic field, and the sensor is configured to provide a displacement signal indicative of the linear displacement of the roller based on the measured intensity of the magnetic field.

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